UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING TO SOLICIT PUBLIC
INPUT ON DRAFT SUPPLEMENT TO GENERIC
ENVIRONMENTAL IMPACT STATEMENT ON
DECOMMISSIONING OF NUCLEAR FACILITIES

Symposium Room
Radisson Hotel
3030 Warrenville Road
Lisle, Illinois

Thursday, April 27, 2000

The above-entitled meeting commenced, pursuant to notice, at 7:06 p.m.

PARTICIPANTS:

CHIP CAMERON, Special Counsel for Public Liaison, NRC, Moderator

DINO SCALETTI, NRC Senior Project Manager, Decommissioning Section, Project Directorate IV

Decommissioning

MICHAEL MASNIK, Chief, Decommissioning Section

PARTICIPANTS: [Continued]

STEVEN SHORT, Pacific Northwest National Laboratory

EVA ECKERT HICKEY, Pacific Northwest National Laboratory

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DAVE WRONA, Project Manager

JIM WILSON, Environment Specialist

PHILLIS SOBEL, Office of NMSS.

PAMELA ALLOWAY-MUELLER, Public Affairs Officer

BRUCE JORGENSEN, Chief, Region III Decommissioning Branch

AUDIENCE PARTICIPANTS:

MICHAEL KLEBE, Illinois Department of Nuclear Safety

LYNNE GOODMAN, Detroit Edison at Fermi 1

PAT SIMPSON, Commonwealth Edison

JACK BARNETTE, US EPA, Region V, Chicago

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P R O C E E D I N G S

[7:06 p.m.]

MR. CAMERON: Good evening, everybody. My name is Chip Cameron, I am the Special Counsel for Public Liaison at the NRC, and I would like to welcome you to the NRC's public meeting on the development of the Generic ~~Evaluation~~Environmental Impact Statement on Reactor Decommissioning, and it is my pleasure to serve as the moderator for tonight's meeting.

And I would like to cover three things briefly with you before we get into the substance of tonight's program. One are the objectives of the meeting. A second thing is the format and ground rules. And the third item is I want to give you a brief overview of the agenda tonight, so you will know what to expect.

In terms of objectives, the NRC is here tonight to provide you with information on the Environmental Impact Statement process, why we are preparing a Generic Environmental Impact Statement on Reactor Decommissioning,

and also to give you some background information on reactor decommissioning. But, most importantly, we are here tonight to listen to your comments, your suggestions, your advice on the issues that the NRC should evaluate in preparing the Environmental Impact Statement.

And in this regard, this meeting at this stage of the Environmental Impact Statement process is called scoping, and the Environmental Impact Statement that the NRC is preparing is designed to assist us in making decisions on reactor decommissioning issues, and scoping helps the NRC to identify information on the types of environmental impacts and the alternatives that should be evaluated by the NRC in preparing this Environmental Impact Statement.

We are also asking for written comments on the scoping issues, but we are here with you tonight to talk to you in person about these issues. I think the presentations you hear tonight will give you an opportunity to hear what other people in the audience have to say on these issues, and may help you prepare any written comments that you want to send in to us on these scoping issues, and we are going to have more details on that.

But I just want to emphasize that even if you don't file any written comments, any comments that you give

us tonight will be considered as comments on the scoping issues.

In terms of ground rules for tonight's meeting, they are pretty simple. We are going to have some brief presentations, two brief presentations by the NRC staff and our consultants on this particular effort. After each of those presentations, we are going to go out to you for questions and comments, so that that will make the meeting a little bit more invigorating, a little bit more interactive.

After those presentations and discussion periods, we will go out for open discussion on any issues that you might want to address. And I will give people who want to make a formal statement an opportunity to make a formal statement. Again, I emphasize the fact that any comments that you make during the discussion periods after the presentation, those will be treated as comments in scoping, just as the formal statements will be treated as comments in scoping.

If you want to say something, just signal me and I will bring the microphone over to you, and please state your name and affiliation, if appropriate, for the transcript. We are keeping a transcript so that we have a record of your comments. And I would just ask you to try to be concise in

your comments. We are not setting any set time limit on anybody, but we do make sure that everybody gets a chance to talk tonight, so I may have to ask you to summarize so that we can move on to someone else. But since we are not sort of ~~barging~~buldging out from the rafters here with people, I think we will have plenty of time for all the discussion that you want to get into tonight.

And I guess with that, that pretty much gives you an overview of what we are going to be doing. And we are going to go to Dino Scaletti from the NRC staff in a minute to come up and do a presentation for us, and then we will go out to you for questions and comments. And I would just thank you for all coming out tonight and we look forward to listening to you.

And, Dino, are you going to introduce, you know, all of our contractors and everything?

MR. SCALETTI: Yes.

MR. CAMERON: Okay. All set?

MR. SCALETTI: Yes.

MR. CAMERON: All right. This is Dino Scaletti from the Office of Nuclear Reactor Regulation.

MR. SCALETTI: Thank you, Chip. I guess it would be appropriate right now to introduce the people from the

Nuclear Regulatory Commission here. And starting with Dr. Mike Masnik, he is the Section Chief of the Decommissioning Section.

Ms. Ann Hodgdon, who is a Senior Attorney is the Office of General Counsel, who is doing decommissioning work for us.

Mr. Dave Wrona, who is a Project Manager in the Office of Nuclear Reactor Regulation in the Decommissioning Section, who also works for -- I work for Mike Masnik, and so does Dave.

John Hickman, who is, again, another Project Manager in our section.

Stew Brown, who is a Project Manager in the Office of NMSS.

Mr. Jim Wilson, who is a Project Manager and an Environmental Reviewer, and he is not in the Decommissioning Section, but he does a lot of work with us.

Ms. Phillis Sobel, I believe is here someplace, from the Office of NMSS.

Ms. Pamela Alloway-Mueller is here from the Public Affairs Office in Region III.

That is Bruce Jorgensen, who is here from Region III, and the Decommissioning Section Chief for the

Decommissioning Section in Region III.

And have I missed any NRC people? Pardon? Well, Eva is not -- I am going to get to her. And we have two members with us tonight from Pacific Northwest Laboratories who have contracted to us to help us with the Generic Environmental Impact Statement, Ms. Eva Hickey and Mr. Steven Short.

With that, again, I would like to -- you know my name -- I would like to thank you for coming to this public scoping meeting. I am going to take a few minutes to give you an overview of why and how the NRC plans to develop a Generic Environmental Impact Statement for Decommissioning Reactors.

First, I would like to tell you about our agency. The NRC was formed as a result of the Atomic Energy Act of 1994, the Energy Reorganization Act of 1974. The NRC's mission is to regulate the nation's civil, civilian use of nuclear materials to ensure adequate protection to the health and safety of the public and workers, and to protect the environment, and provide for the common defense and security. Next slide.

The NRC mission is accomplished through the regulation, licensing, inspection and enforcement of nuclear

reactors from the time of construction through the termination of the license following decommissioning. The NRC regulations are issued under Title 10 of the United States Code of Federal Reactors.

For commercial power reactors, the Nuclear Regulatory function includes of these facilities. The nuclear power plant license is based on a set of established regulatory requirements that ensures the design and proposed operation are performed and based on radiological safety standards.

The NRC conducts routine inspections to ensure that the plant design and operation conforms to the license requirements, and enforcement actions are taken in the event that they find any of the license requirements have not been satisfied.

NRC's responsibility for a nuclear power plant, for a nuclear power reactor are for the entire life cycle of the facility, construction through license termination. And the NRC maintains the license and continues to regulate through the decommissioning process until a license is terminated. It is the decommissioning process that is the focus of this meeting tonight. The NRC is concerned with nuclear power plant safety and with the protection of the

environment.

With that brief background, I would like to discuss why we are here tonight. The purpose of this meeting is to discuss the Generic Environmental Impact Statement on the decommissioning of permanently shutdown nuclear power reactors that the NRC proposes to write. We are going to describe the process set forth by the National Environmental Policy Act or NEPA for developing this Generic Environmental Impact Statement, as well as provide you with some background information on nuclear reactor decommissioning.

Today's meeting is not a formal hearing, but is an opportunity for the NRC to gather information about the public's potential concerns about the environment impact from decommissioning. The NRC will develop the Generic Environmental Impact Statement in accordance with the NRC's responsibility under the National Environmental Policy Act.

Today's meeting also provides us with an opportunity to describe to you the steps that occur during the preparation of a Generic Environmental Impact Statement and to tell you the schedule that will be used to develop this document.

Next, I want to talk about the NEPA process. The

National Environmental Policy Act was enacted in 1969. NEPA places the responsibility on federal agencies to consider significant aspects of the environmental impact of a proposed action. It requires that all federal agencies use a systematic approach to consider environmental impacts during the decision-making.

The NEPA process also is structured to ensure that federal agencies will inform the public that it has indeed considered environmental concerns in its decision-making process, and invite the public participation to evaluate the process. This meeting is part of the process. Also, this meeting is required by 10 CFR Part 51 of our regulations.

NEPA requires that an Environmental Impact Statement or assessment be prepared for all major federal actions. Supplements to drafts of Final EISs are required when there is significant circumstances or information relevant to the environmental concerns. This is the situation we are in with the new regulation and the additional experience from decommissioning facilities and it is an appropriate time to supplement and revise the original Generic Environmental Impact Statement.

Generic Environmental Impact Statements are allowed in cases where there is need to address generic

impacts that are common to a number of similar proposed actions or similar facilities. The action we are looking at, as I mentioned previously, is decommissioning of nuclear power reactors.

What exactly is a Generic Environmental Impact Statement for decommissioning? It identifies the environmental impact that may be considered generic for all nuclear reactor facilities. It also identifies the environmental impacts that need to be considered in more detail for a specific facility. Next slide.

The Generic Environmental Impact Statement will examine a range of environmental impacts resulting from the range of differences in nuclear facility designs, decommissioning methods and facility locations. Next slide.

Why are we supplementing the Generic Environmental Impact Statement for decommissioning? The original statement for decommissioning was published in 1988, therefore, it is over 12 years old. A lot of new information has been gained since that time. In addition, in 1988, there was an increase in the amount of decommissioning experience. In the U.S., currently 21 nuclear facilities have permanently ceased operations. As a result of this experience, there are over 300 years of

decommissioning experience before the NRC. There is a lot of information available regarding the environmental impacts of decommissioning commercial nuclear power plants.

As I said previously, the original Generic Environmental Impact Statement was published in 1988 as NUREG-0586. It looked at decommissioning of all sorts of facilities that hold licenses with the NRC. The revised Generic Environmental Impact Statement, however, will only address permanently shutdown reactors and will not include decommissioning of fuel fabrication plants or independent spent fuel storage facilities, nor non-power reactors. It will, however, be published as a supplement to the original impact statement, NUREG-0586, so that the information related to decommissioning other types of facilities will still be contained in the original impact statement, but the new information learned from decommissioning of commercial power reactors since 1988 will be contained in the supplement, draft supplement developed later this year.

The NEPA process follows certain steps the NRC is required to follow -- follow this process, which provides consistency for all EISs prepared for by all federal agencies. The first step in this process is the Notice of Intent which is published in the Federal Register. The

Notice of Intent informs the public that an EIS is going to be published. The notice outlines what the process is going to be, invites the public to come and participate, announces the location and time of the public meetings, and designates the contact at the NRC for more information.

The Notice of Intent for this action was published -- the first Notice of Intent was published in the Federal Register on March 14th, 2000. The second notice identifying this location was published in early April, I believe April 11th of this year.

In addition to this meeting, other public meetings will be held in Boston, Atlanta, and San Francisco. Scoping meetings are used early in the NEPA process to help the federal agencies decide what issues should be discussed in the EIS. It helps us define the proposed action and determine any peripheral issues that may be associated with the proposed action.

Scoping identifies other related actions such as other environmental assessments or other Environmental Impact Statements that are being performed by other state and federal agencies, so that may impact on the decommissioning activities, which allows us to coordinate with other state and federal agencies early in the process.

Public comments on the scope of the GEIS must be received by July 15th, 2000.

Transcripts and meeting summaries will be issued shortly following each of the scoping meetings. All comments will be summarized and addressed in a scoping summary report, and that report is scheduled to be issued sometime in mid-July -- mid to late July, I should say.

Once scoping is accomplished, the NRC will perform an evaluation of the environmental impacts associated with the decommissioning process. After the NRC has conducted the environmental evaluation, we will issue a Draft Environmental Impact Statement for public comment. In this case it will be a draft supplement to NUREG-0586. It is scheduled to be published in early 2001.

After we gather comments and evaluate them, it may change the position in the EIS based on those comments. Those comments will be identified and evaluated, again, and if significant changes are made in the draft, then this would require additional public meetings.

We will issue the Final EIS, and that is scheduled to be done in late 2001.

We have, to assist you, if people want to comment, we have put together excerpted portions of NUREG-0586, which

you probably saw coming in. In that are portions of the original Draft Environmental -- Generic Draft -- Final Draft Environmental -- Final Generic Environmental Impact Statement for power reactors. It is only the power reactor section, the introduction of the power reactor section, so this is mainly what we will be supplementing in the upcoming Impact Statement.

That would conclude my presentation.

MR. CAMERON: Let's see if there is any questions for you, Dino, on your presentation. Does anybody have a question?

Michael, if you could just give your name and affiliation for the transcript, please.

MR. KLEBE: Sure. My name is Michael Klebe. I am with the Illinois Department of Nuclear Safety. A couple of your overheads indicated that there was new information since the report was originally produced in 1988. Could you identify in some sort of terms what that new information is?

MR. SCALETTI: Certainly. There is -- we have new regulations that were promulgated in 1996 regarding decommissioning. There are also a large number of plants, Trojan, Maine Yankee, Haddam Neck, who are all under active decommissioning, and this information will be reviewed and

evaluated in the Environmental Impact Statement.

MR. CAMERON: Let's let Michael supplement.

DR. MASNIK: I am Mike Masnik. I think, you know, when we say that a document was produced in 1988, it is based on data that was probably five or six years earlier than that, because we go through the EIS process, which is a number of years, and the collection of data. So, we generated the 1988 GEIS based on data that was collected in the early '80s. We didn't have much experience in decommissioning facilities back then. In fact, I don't believe we had any as far as power reactors are concerned, commercial reactors.

So, there is a lot of empirical data that has been generated since '88, things like estimates of worker exposure. A lot of those estimates were based on just -- I wouldn't say a guess, but we figured it would take so many hours to remove a piece of pipe. We think that it would be in a field of approximately so many ~~MR~~millirem per hour. And for that particular task, it would take so many person-rem to accomplish it.

Well, it turns out now we have good data where the licensees have actually done that kind of work, and we are hoping to get that information from the licensees and factor

that into the GEIS, so that the document that we are going to produce will take advantage of a lot of the experience that the industry has gained since '88.

Did that answer your question?

MR. KLEBE: Sort of, but no. I guess the worker exposure, okay, that is the types of things that I am looking for, is what specific issues have caused you to go through this. I mean I realize that there have been a number of plants that have gone through decommissioning, but what about those decommissioning activities occurred, or did you find that really sparked the need update the GEIS? I mean was there something so dramatically different in terms of worker exposure, volume produced, you know, volume of either high level waste or low level radioactive waste spent? I mean are you talking about differences in disposal methodologies or decommissioning methodologies? Are you looking at entombment? I mean what basically got the bug in your bonnet to change this requirement?

DR. MASNIK: I can talk a little bit about waste volumes, for example. There has been, because of the way utilities are charged for the disposal of waste, there has been a tremendous effort for volume reduction. So a lot of the estimates for volume that were in the '88 were unusually

high. And when we looked at the what the actual volumes of waste that are being shipped from plants that being decommissioned, they are significantly lower, so there is a big change there.

Cost is another factor that has changed to some extent since the '88. So everything you mentioned were factors in the decision to go ahead and probably update the -- well, to go ahead and update the GEIS. I think we felt that 12 or 13 years is a long time to go between relying on a document like GEIS, and particularly since there has been so much in the way of advancements in the field.

MR. CAMERON: It may be that after Eva Hickey's presentation that some of this may become clearer to you. Did you have a --

MR. SCALETTI: We have also had requests from the Environment Protection Agency, from the industry and the public at meetings to update this, so it is a combination of all of those.

MR. CAMERON: Did you have any assumption in your mind about why we might be -- why the NRC is doing this?

MR. KLEBE: No, I just wanted to know why. I mean you just had this Generic -- we had this report out there, we think it is time to update it. But from my perspective

as, you know, someone that is sort of involved in it, is the lacking of the understanding of why, the actual specifics as to why you took -- that is all, I am just trying to understand.

MR. CAMERON: When we are done with Eva's presentation, if you are still unclear about some of this, we will go back to that.

Just -- excuse me. State your name.

MR. SHORT: Steve Short with Pacific Northwest National Lab. We did the studies that supported that earlier GEIS and some of the assumptions that we made about how decommissioning would proceed are dramatically different now. For instance, we assumed you had to segment the steam generators and pressure vessels, reactor pressure vessels, and that is not necessarily happening, and that is where a lot of your dose segments is coming now, and some of your waste volume reductions.

So, just how utilities are actually accomplishing decommissioning are quite a bit different than some of the assumptions that were made earlier.

MR. CAMERON: Okay. Thanks, Steve.

Do we have another question? And, again, if you could just state your name and affiliation, if appropriate.

Thank you.

MS. GOODMAN: Hello, I am Lynne Goodman with Detroit Edison at Fermi 1. I think you mentioned that this is going to cover all power reactors. I wanted to check that out.

MR. SCALETTI: Yes.

MS. GOODMAN: Because one of the weaknesses I think that is in the current Environmental Impact Statement is that there are some power reactors that are not on the list of who is explicitly covered and also not on the list of those that are explicitly not covered. I am looking about the gas reactors, the sodium reactors, that we do have some shutdown facilities that I hope are very clearly covered by the revision and supplement.

MR. CAMERON: Okay, Dino, do you want to clarify on that?

MR. SCALETTI: Thank you. We plan to -- obviously, the majority of the reactors out there are PWRs and BWRs and, certainly, we are going to cover those in detail. The gas, I mean Fort St. Vrain has been decommissioned and no longer falls under this, under our GEIS.

And can you identify what other reactors we are

referring to?

MS. GOODMAN: Peach Bottom and Fermi.

MR. SCALETTI: Fermi. Oh, Fermi, okay.

MS. GOODMAN: Fermi 1.

MR. SCALETTI: Okay.

MR. CAMERON: Peach Bottom and Fermi 1 if the transcript didn't pick that up.

MR. SCALETTI: We plan to cover them.

MR. CAMERON: Okay. Any other questions before we go on to the next presentation? Yes, sir.

MR. SIMPSON: I am Pat Simpson with Commonwealth Edison, and I just was wondering what the NRC's intent is once the final EIS is issued in terms of what impact that would have on reactors that are already shut down, but not having their licenses terminated yet at that point. What would be the expectation for NRC and utilities to look at the EIS again?

MR. SCALETTI: Well, for instance, Zion Station, we have already reviewed the PSDAR against the existing Generic Environmental Impact Statement and the existing Operating Environmental Impact Statement that was issued back in the -- whenever it was issued, 1970s. I see no intent to backfit these decommissioning reactors to try to

force-fit them into meeting the requirements of the new statement.

MR. CAMERON: You know, Michael, maybe besides what you were going to say, you or Dino might expand a little bit on that question and tell people what are the potential ways that this GEIS may be used in NRC regulation.

DR. MASNIK: The GEIS is an important document from our perspective, from the point of view of decommissioning, because it sets an envelope in which the licensee can decommission the plant. It sets more or less the environmental limits. And if the licensee, for example, proposes to make a change to the facility during decommissioning that results in an environmental impact that is outside the bounds of the Generic Environmental Impact, then it has to get a review and approval approach, or has to do an review and approval approach.

So, it is important, what we are doing is we are updating the GEIS, okay. And what that will do will change the boundaries slightly based on the more current information. And we think that it will better define for the public what the potential impacts are for the plant.

We don't see that it is going to change things much as far as the industry is concerned. Most licensees in

their screening of changes to the facility actually have a requirement to look at whether or not the action that they are contemplating will exceed previously issued Environmental Impact Statements, and that will continue, and the envelope will change slightly, and, hopefully, will be a lot more realistic than what we are operating under now, which is an outdated document.

MR. CAMERON: Adam, did you have anything? Okay. Thanks, Mike.

Any other questions before we go on? Some of these questions may be further elaborated on after we are done with Eva's presentation.

Thank you very much, Dino.

And Eva Hickey from Pacific Northwest National Lab is now going to talk about the NRC's current reactor decommissioning process.

MS. HICKEY: I am sorry, I don't think this particular viewgraph is in your handout, but I wanted to address the definition of decommissioning. But first I would like to welcome you all. As Chip said, my name is Eva Hickey, and I am from Pacific Northwest National Laboratory. I am the Task Manager and the team lead for the multidisciplinary team that will be conducting the

environmental evaluation and drafting the Generic Environmental Impact Statement.

So, with that, next i would like to talk a little bit about decommissioning in general. I would like to spend a few minutes discussing the background, the process of reactor decommissioning, the NRC requirements, methods of decommissioning, activities that take place during decommissioning and some of the experience that we have seen with decommissioning.

The definition of decommissioning is simply the safe removal of a facility from service and the reduction of residual radioactivity to a level that will permit termination of the license.

In 1988, when the Generic Environmental Impact Statement was published, the NRC regulations at that time required that a comprehensive decommissioning plan be written when a nuclear power plant was at the end of their life cycle. This plan~~t~~ was very comprehensive and required that a comprehensive list of activities be defined. And in the 1990s, NRC reassessed the value of this decommissioning plan.

Experience showed that -- two things. First, early in the process, the licensees weren't really sure

about the specific activities that would be conducted during decommissioning. And the second thing observed was the process early in decommissioning, those activities weren't that different from what was taking place at an operating facility. And, therefore with these two ideas in mind, NRC decided that having the specific decommissioning plan was not necessary.

So new requirements were promulgated. And I am going to talk through those a little bit, relating them to the decommissioning process. First, early on, once a plant has decided that it is going to permanently cease operation, there are two certifications that the licensee must make, and the first is that operations have permanently ceased, and the second certification is that fuel has been removed from the reactor vessel. Once these two certifications have been made, the licensee is no longer authorized to put fuel into that reactor and run it.

Now, the next thing that happens, and it is required within two years after the licensee has permanently ceased operation is that a Post-Shutdown Activities Report must be submitted to NRC. I am going to talk more about that in a minute. But the PSDAR has several features to it. It has a description of the planned decommissioning

activities, a schedule for these activities, a cost estimate and it addresses environmental impacts.

To continue talking about the decommissioning process, also, within two years of the decision to permanently shut down, the utility must submit a site-specific cost estimate. And this cost estimate will be compared with the decommissioning funds that the licensee has available, and if the cost estimate is higher than those funds, then the licensee must obtain additional funding to ensure that decommissioning can be completed.

As decommissioning progresses, and about two years prior to when the license is to be terminated, the licensee must submit a license termination plan. And in this plan there will be a site characterization of the facility which will discuss the residual amounts of contamination. It will describe the remaining dismantlement activities, plans for site remediation, and it will give the detailed plans for the final radiological survey that is required.

Once decommissioning is completed, once the final radiological survey has been performed, and once NRC finds it acceptance, and that it meets the criteria for license termination, the license will be terminated, and NRC will no longer have oversight over that facility.

Okay. Let's go back to the Post-Shutdown Decommissioning Activities Report, which I am going to call the PSDAR. This document must be submitted within two years of the decision to permanently cease operation. It has a description, a general description of the planned decommissioning activities. It has a schedule for the milestones for when these activities will be completed, and it has an estimate of the expected costs for decommissioning.

It also has a discussion of the environmental impacts, and this is with respect to the reasons for the licensee concluding that the environmental impacts are bounded by previously issued Environmental Impact Statements.

Now, what is the purpose of the PSDAR? Well, first, it provides a general overview of the decommissioning that the facility is going to undertake. And with the schedule of milestones, it allows the NRC to determine when they need to make major -- when they need to have safety inspections. And along with the schedule and decision of when to have safety inspections, it allows the NRC to allocate appropriate resources to follow the safety of the decommissioning plan.

It requires the licensee to look at their financial situation early on in the decommissioning process to determine whether they need to secure additional funding.

And, finally, it ensures that decommissioning does not result in any environmental impact that has not previously been considered.

Next, I would like to discuss the methods of decommissioning. And in our revised Generic Environmental Impact Statement we will be discussing four methods. The first two I will discuss in a little more detail, DECON and SAFSTOR, but what I would like to mention first is ENTOMB. In the 1988 Generic Environmental Impact Statement it was concluded that ENTOMB probably was not a viable option for decommissioning at that time, and the reason for this was because NRC requires that decommissioning be completed within 60 years of permanently ceasing operation of the plant, and when you have an entombed plant, that would not be viable. You would not have the radioactive material removed within 60 years.

So the other two main methods are DECON and SAFSTOR. DECON is when the licensee starts their active decontamination and dismantlement shortly after they cease operation. SAFSTOR is a method where the licensee puts the

plant in a safe and secure -- makes it safe and secure and then stores it for some period of time, and then they will complete the decontamination and dismantlement at a later time.

And then there is really a fourth method which is a combination of DECON and SAFSTOR. And what NRC is finding is that many sites are actually going through this combination of DECON and SAFSTOR.

The typical activities that take place during DECON are removal of contamination from the systems and the structures, and as part of decontamination, removal of large radioactive components. The dismantlement aspect of DECON is removal of piping and other smaller components, and in some cases actual removal of buildings. And transportation of waste to storage facilities is one of the important activities in DECON.

In SAFSTOR, I will discuss two types of activities. First, the preparation for SAFSTOR, and in this the licensee will deactivate systems. They will drain and flush plant systems. And they will perform a radiological assessment, a historical assessment, so that when they go back to complete the decontamination and dismantlement portion of decommissioning, they will have a good historical

basis for where the radiological materials are.

Then, once the plant comes out of -- oh, no, I am sorry, while the plant is actually in SAFSTOR, there will be preventive and corrective maintenance on the buildings and insurance that the structural integrity is being maintained.

But I want to reiterate that SAFSTOR will also, at the end, go through a decontamination and dismantlement activity.

Next, this was mentioned earlier, 21 reactors have shut down since 1963, and we have gained a lot of information, and will continue to obtain information from these facilities as we develop the Generic Environmental Impact Statement supplement.

Two of the facilities have completed decontamination and dismantlement, and these facilities have had their license terminated. There are six facilities that are currently undergoing decontamination and dismantlement. There are seven currently in long-term storage, and two that are planning long-term storage, although, actually, as of last night, Zion has indicated that they are going into long-term storage. So there is actually nine plants that are in long-term storage. And there are four plants that are currently planning a combination of long-term storage

and decontamination and dismantlement.

And to answer the question that was asked earlier, yes, we are looking at all of the facilities, all the different types of reactors. There are eight boiling water reactors, there are 10 pressurized water reactors. There are three other types of reactors. And these were all reactors that had NRC licenses at one time, and they had between 23 megawatts, which was a very small reactor, up to thirty-four-hundred-and-eleven megawatt thermal.

Okay. The last discussion on decommissioning is the license termination process. And, as I described earlier, a license termination plan is submitted by the licensee two years prior to the license being terminated. And during this termination process, soil remediation will take place. There will be a final radiation survey. And then, once NRC has decided that the final survey is adequate and that the criteria is met for release, then NRC will terminate the license.

Next, I would like to move on to the environmental impacts that we will look at in the Generic Environmental Impact Statement. We have discussed the methods of decommissioning, the activities that take place during decommissioning in very general terms. And what the PNL

team will do is look at all of the parameters that would affect the environmental impacts and, based on the methods, the type of plant, the location of the plant, how long the plant was operated, how long it has ceased operation, and then we will look at impacts like those that up are on the board. I am not going to read them all. But radiological impacts will obviously be an important issue that we will look at. Cost is an area we will look at. We will look at all of these, but some of these I just wanted to point out were obvious, and we have seen changes between the 1988 Generic Environmental Impact Statement and the one that we are going to, the supplement.

These impacts listed up here are the ones that are commonly evaluated in Environmental Impact Statements for the Nuclear Regulatory Commission when they follow the NEPA process.

Okay. Finally, we would like to invite your comment. The comment, the scoping period is open through July 15th. Comments can be provided by mail, in person or e-mail to Mr. Dino Scaletti. His phone number is on this viewgraph, and outside the door is another information sheet that gives his address and his e-mail address.

And, so, with that, I think that you have heard

enough from us on what we are going to do. Now, we welcome your comment on the scoping. Thank you.

MR. CAMERON: Thank you very much, Eva.

Let's see if there is questions on Eva's presentation that we might answer. And I would just also remind you that the purpose of the scoping process is to get suggestions and recommendations from the public on preparing the Generic Environmental Impact Statement. So if any of you have suggestions on the process that we are using, or on the types of impacts, or on the alternatives that should be considered. And, John, could you put that slide up that had all of the typical categories of impacts that are going to be looked at, just so that people can -- it might be useful in terms of seeing if anybody does have any comments on other categories of impacts, or specific types of impacts under these particular categories.

How about questions for us? Let's go to this gentleman right here. Or you don't have to have a question, you can make a comment.

MR. BARNETTE: Oh, good. Jack Barnette, US EPA, Region V, Chicago. On your Viewgraph Number 15, you talk what is a PSDAR, and you mention activities and schedule and estimates of costs. The last one says discussion of

environmental impacts. Can you get into that? That is strictly radiological impacts, is that correct?

MS. HICKEY: Yes, because -- no? Okay.

MR. CAMERON: Mike Masnik.

DR. MASNIK: Yeah. The thought there in the rulemaking process was that what the agency needed was a schedule. What we needed was an idea of what the licensee plans to do. And then we thought, well, gee, we ought to make sure that the licensee thinks about how much it costs. And then what we wanted to do was make sure in the decision as to what exactly they planned to do during decommissioning, they should consider the existing environmental assessment. That is not just radiological. It looks, for example, at waste burial, volumes, it will look at the radiological, ~~nut~~but it also includes non-radiological issues, too.

MR. BARNETTE: I have a second question.

MR. CAMERON: All right. And, Mike, you might want to elaborate at some point on non-radiological types of issues to the extent that -- all right. Endangered species. Things like -- I guess that might not be non-radiological. Anyway, I am going to let you ask your question.

MR. BARNETTE: The second question is on Viewgraph

24, where you talked about what environmental impacts will be assessed, and you mentioned a whole list of things, land use and historical, et cetera. You had transportation. What does mean exactly? Does that mean transportation to environmental media, or does that mean literally transportation of wastes off site? Can you give me some details on that?

MS. HICKEY: What we are talking about there is the transportation of the waste primarily. But we would be looking at any impact from any transportation that would take place in decommissioning the facility.

MR. BARNETTE: Okay. What I mean though is, okay, you mean literally packing it on a truck or a railcar, that type of transportation?

MS. HICKEY: Yes.

MR. BARNETTE: Okay.

MR. CAMERON: Okay. And let's try to use the microphone here. Do we have another -- did you have a question, sir?

MR. LITTLETON: Brian Littleton, I am with the EPA. When you speak, I guess, taking into account ecology, or the impact ecology into developing the supplemental Environmental Impact Statement, do you have any idea

specifically either on how that, how you are going to account for that?

MS. HICKEY: Well, I guess I don't want to say yes at this point, because we are still doing that review. What we will be looking at is the impact to the site as it goes through the decommissioning process. One of the areas that we specifically look at are threatened and endangered species.

MR. LITTLETON: Will there be any type of evaluation on some generic kind of site conditions such as -- I mean potential, I guess, ground water pathways that might be available and that type of information, or will that have to be submitted, I guess, on a site-specific basis?

MS. HICKEY: No, that is one of the issues that we will look at. And what we are going to do is determine whether it is a Generic Issue. We are not saying in all cases that these are Generic Issues. We are going to evaluate and determine which issues are generic, and then we will state the ones -- also, we will state the ones that are non-generic and will require site-specific evaluation.

DR. MASNIK: One of the things, Brian, -- Mike Masnik again -- is that, for example, one of the things that

might occur decommissioning is you might need a laydown area or a preparation area for large components, and that may disturb some property around the plant. And that is the kind of things, I think one of the things we are looking for as far as ecology.

Obviously, many of the changes in the facility, for example, ~~quad-key-packs~~aquatic impacts, you no longer have large quantities of water being removed from the water ~~course~~sourse. We will look at that. That is change, it is something to be evaluated.

If we are looking at ground water pathways, I think you are familiar enough with our process, you know that there is a license termination plan that is submitted later on in the actual decommissioning process. And there is where those very site-specific issues should be addressed and would be. But I mean we will look at it in a general way at this time, too. But those kinds of very site-specific issues, it was mentioned endangered species, that is something we are not going to be able to -- we are not going to be able to detail generically for all the plants in the country. That is something clearly that has to be a site-specific issue.

MR. LITTLETON: Where you find those things, you

will lay out --

MR. CAMERON: Let's get you on the transcript there.

MR. LITTLETON: Where you find those things, you will lay out specifically those things that maybe the specific, I guess, site should provide information on that is undergoing decommissioning?

DR. MASNIK: Yes, that is the plan.

MR. LITTLETON: All right.

MR. CAMERON: Good work if you can get it passing this microphone back and forth. Adam.

MR. LEVIN: Adam Levin, Commonwealth Edison. My question may be a little premature, but I was curious of is, as you put together this Environmental Impact Statement, one of the things that the licensees need to do along the way is to compare their environmental situation going into decommissioning with the results of this Environmental Impact Statement. And what I was wondering was, how are you going to -- have you determined how you are going to select what would be various boundary conditions for each of these environmental impacts?

As an example, the volume of waste that is generated, how are you going to determine what boundary

condition will be? Have you given some thought to that?

MS. HICKEY: Well, what we are planning to do, and that is why we are going and collecting as much information as we can from the sites that are undergoing decommissioning, so we can set some boundaries from that. And in some cases, it may be -- the bounding may not be different than the original GEIS, and in some cases we may find that it is smaller or larger than what was in the original GEIS. But what we are trying to do is take the real information that we have now and provide those boundaries.

Does that answer your question?

MR. CAMERON: Adam, do you have a recommendation for us on them?

MR. LEVIN: Well, I was thinking in terms of, and, really, it is from an analytical standpoint, but a couple of things crossed my mind, and that is the example with the waste volume, using that as a boundary condition. One might either choose an average waste volume for all PWRs and assign some sort of contingency on top of it, and say that is your boundary condition for waste volume, or one might look across the population of PWRs and the waste volume that is generated and choose a risk-based number such as a 90

percent confidence level with a 90 percent probability that you will be within that boundary.

So, I was, you know, a couple of things were going through my mind in terms of how you might set boundary conditions that end up being the parameters in your GEIS.

MS. HICKEY: Yeah, and I think that we have not -- we have thought about those, but we have not decided exactly how we are going to handle that yet, because we haven't done the full characterization of the environmental impacts. And I think we need to do that and lay that out before we can decide on an absolute approach on how to put that in the document.

MR. CAMERON: And, again, if any of you have thoughts on or suggestions on these issues that you might want to send in, in writing to us, it would be very helpful.

Yes, sir.

MR. SUERMANN: Do you want me to spell the name for the recorder?

MR. CAMERON: If it needs to be spelled.

MR. SUERMANN: My name is John Suermann, the last name is S-u-e-r-m-a-n-n. I am just here as a private citizen. I have two questions. Since you are working on the decommissioning aspect of the supplement to the GEIS, is

there a presumption on what is happening in the background that the spent fuel has been removed from the plant? In other words, are you presuming it is stuck in an ISFSI at the site, which means you are still going to be there after the plant is decommissioned? How is that going to be addressed in a GEIS?

And, secondly, will this supplemental GEIS that you are working on come up with preferred alternatives along the lines of other EISs that I have seen for DOE type actions?

MS. HICKEY: Okay. To answer your first question on the spent fuel, this document will not address the issues of the fuel when it is in spent fuel storage, dry cask, ISFSI. At least that is the current, our current understanding of the scope. We are still talking about how to handle the fuel as you take it out of the fuel pool and put it into the ISFSI. Now, we may and probably will address those environment impacts.

But, you know, we are still in the scoping process and so we are still trying to figure out exactly the box around this document.

MR. CAMERON: Do you have a recommendation on that scoping issue, John?

MR. SUERMANN: Well, I haven't figured out my doctoral thesis in answering that question. But something you have to consider is, if the utility removes the fuel from the plant and can certify to the NRC that they are not going to reload any more, but they haven't opened Yucca Mountain, and you are left with keeping it on-site, and you go to proceed to terminate the license, what happens to the control of the fuel in regard to that, when the plant has already been decommissioned? That is one aspect of it.

MS. HICKEY: Well. Okay. The ISFSI is licensed itself and so it will stay there and maintain its license until the fuel is removed and taken to Yucca Mountain or wherever it goes.

MR. CAMERON: Michael, do you want to add on to that?

And we still have a second question, right?

MR. SUERMANN: Right.

MR. CAMERON: All right.

DR. MASNIK: I just want to amplify that typically a licensee has two choices for dry storage. They can either get a general license or a site-specific license. If they get a general license, they have to maintain a license under Part 50. There can't be a situation where you have fuel and

it is unlicensed somewhere, on the ground, somewhere in this country. So, what will happen is if they did have a general license, they would have to convert it to a site-specific license, and, in fact, that three or four acre area would be licensed under Part 72 of our regulations and would stay there until there was a place to ship fuel, and it may be for some time.

What we are looking at is the balance of the plant, the actual reactor building, auxiliary building, fuel building and main facility.

MR. CAMERON: Eva, do you recall the second question?

MS. HICKEY: No.

MR. CAMERON: Okay. John, do you want to repeat that for her?

MS. HICKEY: I know the answer.

MR. SUERMANN: The second question is, when you do the supplement to the GEIS, is it going to produce preferred alternatives along the lines of typical DOE related actions that involve EISs, or is it just going to list a bunch of activities that utilities can look at, and because of the diversity between the type of reactors, it will not specify what the preferred alternative with regard to

decommissioning in general is?

MS. HICKEY: Yeah, that is a good question. Now, actually, in this case what we are talking about, the action is decommissioning, and so the alternative would be not to decommission. And that is, even though that is an alternative, because of the regulations, that can't happen. So that is why when I was -- instead of talking about the alternatives for the types of decommissioning, DECON or SAFSTOR, ENTOMB, I called them methods. And there will not be a discussion of the preferred method of decommissioning.

We will have to address, because NEPA requires it, alternatives, but the alternative would be not to decommission.

MR. CAMERON: Okay.

MS. HICKEY: Because the action is decommissioning and, therefore, --

MR. CAMERON: Is that -- do you want to follow up on that, or does that --

MR. SUERMANN: That answers my question, but I have a third different question. I will let somebody else go ahead.

MR. CAMERON: Okay. We will come back to you, John. Let's go over here.

MR. SIMPSON: Pat Simpson from Commonwealth Edison again. The question I have is, with some of the technologies and other things going on, the amount of waste being generated from a decommissioning site is less than what had been experienced earlier in things, and the question I have is, those earlier numbers were found acceptable in the 1988 Generic Environmental Impact Statement. Now, if the supplement comes out and it says the new numbers in these areas are lower, would that necessarily supersede what was found acceptable earlier? I am kind of gray there in terms of if it was found acceptable earlier to have larger numbers, why you would come out and say now you have got to use smaller numbers?

MS. HICKEY: I am going to let Mike answer that one. That is a policy question.

MR. CAMERON: Okay, Mike.

DR. MASNIK: That is a good question. I would think that what NEPA requires is an honest evaluation, and I think that if we come up with some numbers that are lower than the earlier numbers, that will redefine the boundary. But I am not sure that we are going to find a significant change, but, you know, it is too early to tell.

Now, remember, you know, the process is such that

we do the analysis and then we come out with a Draft Environmental Impact Statement, and then everybody can comment on it. But I think that we need to do an honest evaluation. And it should be the agency's best guess as to what the impact would be. And if we find out it is acceptable, then I think that would define the envelope.

MR. CAMERON: All right. We are going to go up here and then we are going to go to Dale, and we will come back to John. Yes, sir.

MR. AKER: Rock Aker, A-k-e-r, with Commonwealth Edison. This actually is a bit of a follow-up from the question that the gentleman from EPA asked. The categories that were evaluated in the '88 GEIS did cover some non-radiological hazards, contaminants, whatnot, but somewhat by definition, the NRC is the most interested in the radiological implications of decommissioning. I mean ultimately you have to presume, prove that a site is clean before your site is released. And to some extent these are, oh, by the way, other evaluations are explored and evaluated.

Clearly, we are seeing in the industry that there is another federal agency involved, or can be involved in the final and ultimate release of the site, and that is the

EPA, obviously. And particularly, I would say in view of the fact that there are some critical issues that the NRC and EPA aren't shaking their heads the same way at the same time about, I would strongly encourage that this revised document try to incorporate as much as possible the kind of non-radiological contaminants that, frankly, the EPA has interest in, get their participation, and buy into at least the categorization, and even, if you can, some of the boundary conditions, because, as a licensee, that is ultimately going to make it much easier for us, because, otherwise, we may have the problem that we would be released from site license by the NRC and then come under EPA scrutiny, and perhaps appropriately so. So that is my comment.

MS. HICKEY: Thank you. I appreciate the comment.

DR. MASNIK: Mike Masnik, again. I appreciate the comment and I want you to know that I am happy to see that we have three EPA folks here, one from headquarters, which I know Brian now from about, what, about six or eight meetings already. But we have been working with EPA and it is our fondest hope that we get a document we are all comfortable with.

MR. CAMERON: And I guess that, Mike, are there

other efforts that the agency is making outside of this Generic Environmental Impact Statement to try to develop some consistency with EPA on these particular issues, right? Okay.

Let's go to Dale.

MR. RANDALL: Hi, I am Dale Randall with the State of Maine. My question follows on to a response that Mike Masnik made earlier when he said that site-specific issues will be addressed in the LTP. I guess my question is, are non-radiological impacts, per NEPA, intended to be addressed? Is that what was meant by that comment?

DR. MASNIK: I wanted to say that many site-specific issues would be addressed in the license termination plan, but not all. For example, endangered species issues. I mean whenever a licensee finds an endangered species that might be impacted, they are required, and we are required to take some action as well. So, I didn't want to give you the impression that it was just at the license termination plan.

The license termination plan stage requires the licensee to update their site-specific environmental report, and when they do that, that report requires them to look at the whole suite of impacts. It is not just related to

exposure, you know, radiological issues and radiological exposure. So, the answer to your question is, yes, it does require it.

MR. CAMERON: Okay. Michael, you had questions before about why the NRC was doing this, and we alluded to the fact that possibly some of the information that was developed during the course of the meeting might provide a better answer to that. Do you still have any questions on why we are undertaking this particular effort?

MR. KLEBE: No, I have a better understanding of why.

MR. CAMERON: Okay. John, third question.

MR. SUERMANN: If you don't already plan, when you do the supplement to the GEIS, perhaps you should consider what type of document you are going to apply to the licensees when they have to do the decontamination surveys. For example, if you are going to use the MARSSIM process that is used for other facilities right now, instead of having to come up with a specific thing for power reactors relative to this supplemental document, can you build on something that the NRC already has that maybe has been fleshed out in its use by that time, as opposed to reinventing the wheel?

MR. CAMERON: Are we going to you on this one, Mike?

DR. MASNIK: The agency was part of the -- well, it was intimately involved in the development of MARSSIM, and that is what we use now for reviewing license termination plans. So we are not going to -- we are not even going to address that to any great extent, because that is the standard by which we develop a site -- a final site survey to determine whether or not the site can be released.

MR. CAMERON: Okay. While people are thinking about other comments or recommendations for us, or questions, we did have one person sign up to make a formal statement. And, Lynne, would you like to do that now? Do you want to come up to the mike, or do you want to use this one? It is up to you.

MS. GOODMAN: Well, I just have one more question.

MR. CAMERON: All right.

MS. GOODMAN: Lynne Goodman from Detroit Edison again. I have one more question on whether or not this will be considered in the supplement, and that is the existing Environmental Impact Statement briefly discussed release of a portion of the facility before the final termination of the license. I was wondering whether or not the supplement

will further discuss that, whether it would be release of a building, or release of a portion of the facility.

DR. MASNIK: Partial site release is an interesting problem that the agency has been kind of thrust in because of a potential sale of a portion of the Oyster Creek site. Just within the last two months the staff put together a Commission paper, which is before the Commission right now, on a method of releasing a portion of the site. That Commission paper will generate a staff requirements memo probably in the next couple of weeks that will be direction from the Commission towards the staff based on this paper.

The paper is a proposed rulemaking plan, and what the staff had proposed to the Commission was a method of release of property, and that that method would be developed in a rule that would go out for public comment. And my understanding is that we should hear something in the next couple of weeks on that. Partial site release is an issue that will be touched upon in the GEIS. But I think that, hopefully, if things go the way we hope it will, we will be a lot further along on partial site release this time next year.

MR. CAMERON: How about other questions, other

recommendations to the NRC in preparing this? Let's go to EPA.

MR. LITTLETON: This is a question, I have my, I guess, own interpretation of this, understanding of this, but I wanted to request a clarification. If the NRC, in doing this supplemental Environmental Impact Statement does define, let's say, a smaller envelope, does that hold all, I guess, all utilities to, I guess, not having levels, let's say, waste levels, if we are talking about waste levels, waste levels that exceed the envelope that is defined? Maybe a little bit of explanation on that process from your point of view could help out some of the facilities.

DR. MASNIK: I think what you are asking is the issue of grandfathering. In other words, if the new Generic Environmental Impact Statement comes up with a tighter envelope, would it necessarily apply to those facilities that are undergoing decommissioning at the present time? Is that the question?

MR. LITTLETON: That is one way to --

DR. MASNIK: Okay. It is a good question. I am not sure that the Commission has made a decision on that issue. And I think that is something that, you know, we have talked about it some, but we really have made a

decision.

Now, I want you to know that I think that what we have seen, and let's take waste volumes, is that we were off by quite a bit in the original estimate, and that the utilities that are actively shipping waste now are significantly below that number. So, I am not sure that even if the Commission made the decision not to grandfather licensees that would necessarily be a problem for any licensee at the current rate of shipment, but I can't be sure until we do the assessment and look at the numbers.

MR. CAMERON: Okay. Thank you, Mike.

Dino, did you want to add anything on that?

MR. SCALETTI: I believe that he is stating that if someone falls outside the envelope that we develop for the Generic Environmental Impact Statement, how would it be handled? Now, if it fell outside the envelope, then it would require, more than likely, a site-specific analysis for that particular site.

MR. CAMERON: Okay. Thanks for that clarification, Dino.

Does anybody else have a question or a comment? I would note that, again, the written comment period is open, and, also, after we formally adjourn the meeting, the NRC

staff and contractors are going to be here. So, if you want to talk informally, please take advantage of that.

Yes, Lynne.

MS. GOODMAN: Lynne Goodman, again. I have got one follow-up question from the last question. If, other than the boundaries changing, if the methodologies you are evaluating are different than what was originally assumed, let's just say you see that all plants currently decommissioning are pulling out their steam generators whole, would that be what you would set up as being the methodology for the Environmental Impact Statement supplement, or would you evaluate both that some people may cut them up in the future, even those currently decommissioning are pulling them out whole?

MS. HICKEY: What we will do is look at a variety of the ways the activities may be conducted. And I don't think that we would hold that -- I guess we would look at the boundary impact. So, if removing the steam generator whole was the bounding impact, but if you sectioned it as you took it out, it was less impact, then the more bounding impact would be the one we would address.

DR. MASNIK: You know, it is an interesting question, but at many meetings years ago I used to say that,

gee, people would ask me, what would be an example of something that wasn't covered by the GEIS? And I would say, well, what if someone decided to explosively drop the reactor building? And I thought that was something that was so far outside the bounds of reason that it would be -- it would illustrate a good example. I am not so sure that that hasn't been considered by some folks lately.

So what we will try to do is provide an envelope. And if it is clearly outside the bounds of that envelope, then we would have to do a site-specific assessment. That is the best way I can answer the question.

MR. CAMERON: And Mike and Eva, we are looking for any suggestions on alternatives that we should -- that we might generically consider. So, does anybody have any suggestions in terms of alternatives that you haven't heard about tonight that the NRC should look at?

[No response.]

MR. CAMERON: All right. Is it Paul? No. You can still go ahead.

MR. SIMPSON: Pat Simpson again with Commonwealth Edison. I don't really have any earth-shattering ideas of how to decommission a plant, but I guess I have a comment in terms of methodology for this supplemental study in that

there appears to be some amount of concern about changing the envelope and what impact that would have on people that are undergoing decommissioning. I guess my comment would be, if the scope of the study is supposed to be evaluating lessons learned and experience gained from the reactors that have undergone decommissioning, then use your existing study as a baseline and then provide supplements to it in the areas that have been changed or are being done differently, and provide additional information, versus just scrapping the baseline study and then coming up with a new envelope. That way, people that are currently undergoing decommissioning remain enveloped and people that may be evaluating how to do decommissioning in the future will have more up-to-date information.

But it gets back to the issue of you found acceptable several years ago. If there is no basis for saying it is unacceptable now, you shouldn't be changing what is or isn't unacceptable just because licensees are able to utilize better technology to do different things, and that sort of is a negative incentive for certain people to do things better. And, so, I guess that would be my only comment, is if we found the envelope acceptable before, let's leave it there and modify it is in different areas if

something like separation or segmentation of the steam generators or vessels is different, maybe add additional information in terms of what could be expected, but not to force people to do that in the future, or not do that just because you have revised the envelope.

MS. HICKEY: I think that is a good point. And I think what we would have to do is defend why an environmental impact that was considered acceptable before is no longer acceptable.

MR. CAMERON: It seems like there is -- not only you, Pat, but others have raised this concern, and I guess I would ask the NRC staff whether the Generic Environmental Impact Statement will explicitly address this issue about how it will affect the status quo. And, Mike, I don't know if you want to say anything on that now, or perhaps you already have said enough.

DR. MASNIK: I think what you said is a good idea. We need to look into it. I think that, as I mentioned earlier, I think as time goes on and the technology gets better, we should realistically evaluate what the impacts are. But at the same time, I understand the point that we can't constantly tighten the envelope which may have the detrimental effect of putting us in a situation where we

might be changing the waste volume only to result in a larger impact on worker exposure, let's say. And that is something we need to look at.

MR. CAMERON: Okay. Let's go back to -- it is Rock?

MR. AKER: Rock Aker with Commonwealth Edison. A question regarding your evaluation of costs going forward. Will any part of that deal with the changes virtually state by state in deregulation of the electric industry?

MS. HICKEY: I will let Steve handle that question since he is our cost --

MR. CAMERON: Okay. We are going to go over to Steve. Implications of deregulation.

MR. SHORT: In our cost analysis, we will look at a reasonable way of -- we are going to look at reasonable ways of decommissioning plants and develop reasonable estimates of what we think it would take to decommission using those methodologies. That might include using vendors for waste processing, that will reduce the cost of waste processing and generation and that kind of stuff.

Specifically, with deregulation of the nuclear power industry, I don't foresee at this point impacting the cost analysis based on how deregulation might proceed, since

I don't know how to -- I don't know how I would address that. Okay.

MR. CAMERON: Rock, did you want to make a recommendation on how the NRC might address that particular issue?

MR. AKER: I would love to, but that would be my Ph.D. thesis. All I would say, it is certainly premature until we get a better idea of what this document is going to look like. My only point is it certainly is going to have substantial economic impact across the country, so you ought to at least factor that in.

MR. CAMERON: We are going to go to the other doctoral student.

Now, John, did you have another question, comment? Let's stop on the way at Dale.

MR. RANDALL: Dale Randall with the State of Maine. I am looking at Slide 23, which is up on the viewgraph, and bearing in mind that it is a scoping meeting, is this the proposed scope of the current document?

MS. HICKEY: These are the impacts that we are proposing to look at, and part of the scoping is to decide whether there is additional impacts that we should look at.

MR. RANDALL: So you might change those then in

response to a comment?

MS. HICKEY: Right. Exactly.

MR. RANDALL: Okay. Thank you.

MR. CAMERON: Okay. John.

MR. SUERMANN: My question will build on the one that Mr. Aker just asked. When you look at the item or the bullet labeled "Costs" on the current slide on the viewgraph, is the GEIS process going to look at the impact of when a licensee submits its decommissioning plan, that if it doesn't have enough money in its current funding profile, I believe Eva said earlier that the NRC could require the licensee to have to go and get additional funding. If you stop and think about that for a minute, how is the utility going to go out and get capital funding in the marketplace for an asset which is now non-performing, to pay for the cost of decommissioning something?

If that is not considered in the GEIS, then somebody needs to look at it, because you are going to handicap the utilities saying they have to have more funds to decommission, and what kind of quid pro quo are they going to bring to financial markets to get the money to do this when they going to have a non-performing asset?

MR. CAMERON: I guess there is two issues there.

One is should that be, and how should it be addressed in the GEIS? And there is also the separate question, I don't know if we have the information on that, is outside of the GEIS, how would that situation be handled?

MR. SHORT: First off, I guess, you know, Zion is a good example of this. Zion is a reactor power plant that didn't have sufficient funds to do the decommissioning, and so they chose to go to SAFSTOR partly for that reason.

The GEIS will not tell a utility which of those methodologies to use. So while we probably need to address it somehow and in some way, in the end I don't think the NRC will be telling, in the GEIS, that a utility that needs to go out and procure the funds to do immediate dismantlement.

MR. CAMERON: Okay. Anybody want to add anything on the issue generally, even outside the GEIS, as to what happens in a situation like that?

DR. MASNIK: I think the question is kind of taking a turn here. But you are aware, of course, that licensees have a fund and they continually add to it. And the concern very often is for prematurely shutdown plants. The plan is that at the time that the facility ceases operation, there should be enough money in the fund.

Now, what we have dealt with, except in possibly

one case, is facilities that prematurely shut down. I think we have spent a lot of time and effort on being concerned about costs at nuclear power plants for decommissioning and assuring that the money is there. This is a personal opinion, so far it hasn't been a problem. Now, there are licensees that may choose to go into SAFSTOR to build up the fund, but even in those situations where licensees hadn't completely funded the fund, and chose to begin active dismantlement, and a good example for that is Trojan, they have been able to come up with Letters of Credit and money to finish the job.

So I am not sure that it is as big a concern as we once thought. But it is a concern still, and it is a concern that we will address. So, if that helps at all.

MR. CAMERON: Great. Thanks, Mike.

Lynne.

MS. GOODMAN: Will the cost -- Lynne Goodman. Will the cost work that is being done for this GEIS feed back also to the other regulations about adequate funding? Is the cost study going to be totally redone and then revisited there?

MR. CAMERON: Mike, you might want to also address the generic issue of how -- what implications does the GEIS

have for changes in regulations?

DR. MASNIK: It is not our intent to use the GEIS as a basis for changing 50.72 -- 75 -- 50.75, which establishes the generic amount of money that a licensee needs to put aside to assure that there is adequate funds for decommissioning. So the answer is no.

MR. CAMERON: Anybody else before we adjourn for tonight?

[No response.]

MR. CAMERON: I would just thank Eva for her presentation and thank all of you. And I would ask Mike, as the senior NRC official, I believe, if he has anything that he wants to add to close the meeting.

DR. MASNIK: This is the first one of these that we have held, and we weren't sure what we were going to get out of the meeting. And I think all of us from the NRC will go home tonight and say, gee, we got a lot of good questions and we got a lot of good comments. And I am now looking forward to the next three meetings, because I think we will continue to get good questions and comments. And I think we will end up with a document that is a lot better than we would have ever been able to generate on our own.

So, I guess thank all of you for coming and I am

glad that we have had this time to question how we are going to go about doing this. It is a pretty big task. I think it is turning out to be a lot bigger than we had expected. So, thank you very much for coming tonight.

MR. CAMERON: Thank you. We are adjourned.

[Whereupon, at 8:40 p.m., the meeting was concluded.]